

AOL as a 'NOW'

Internet as a 'NOW'

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AOL as a NOW



- ◇ Large Cluster of Unix and NT, hubs routers
 - 10k's of simultaneous users
 - >10k new users a day
- ◇ Heterogeneous computing and networking
- ◇ Off the shelf software, mostly

Operations Issues for AOL

◇ Scalability:

- tripled last year
- 4 million email messages/day
- e.g. gopher/wais gateway is 13 machines, email gateway is several...

◇ Reliability: machines, network, software

◇ Conservative

Internet as a NOW

◇ Distributed AOL or Dialog

◇ Protocols: few,

- server software: many,
- client software: bunches,
- server instances: lots <<<<<Value of the net
- client instances: tons <<<<<Value of the net

◇ Unix is losing its dominance to:

- dedicated hardware
- PC's, Macs, NT

Internet Problems: Structural

- ◇ Technology stream, but no revenue stream
- ◇ Standards process needs help:
 - Reference implementations
 - Better structured system: committees?
- ◇ Lack realtime networking
- ◇ Point-to-point system
 - Except dns, routing, multicast

Infrastructure Needs

◇ Caching: “cFTP, cHTTP”?

- Log info for billing/advertising to owner
- Control of distribution
- Timely changes of data

◇ Reliability

- Mirroring is klunky
- Network hotspots
- Server admin's graduate: no archiving yet

◇ Supernodes “in” network: MIPS, storage, bandwidth, remote control: java server?

Infrastructure needs (more)

- ◇ Multi-user “sockets” for app development:
 - Chat, MUD’s, Virtual spaces
- ◇ Realtime applications:
 - Telephone, conf calls, fast-twitch games
- ◇ Virtual University: beyond the lecture hall
 - Video-on-demand for campus lectures
 - Extend libraries from paper to Lectures, class notes, etc. (tertiary storage, caching, ...)

Conclusion

- ◇ Internet could be the mother of all 'NOW's
- ◇ Internet needs help
- ◇ Internet is worth helping

**Trends: Heavier usage,
Richer files,
Towards realtime**

